Geometry 201 Midterm Topics

Chapter 1:

Use the undefined terms point, line and plane.
Name geometric figures.
State and apply the segment addition postulate and the angle addition postulate.
Name and classify angles.
Find the length of segments on a number line and in the coordinate plane.
Use special angle relationships to find angle measures.

Chapter 2:

Analyze conditional statements and recognize the hypothesis and conclusion.
Write definitions as biconditional statements.
Use deductive reasoning to form a logical argument.
Use truth tables to determine the truth value of conditionals, conjunctions and disjunctions.
Use algebraic properties in logical arguments.
Write 2 column proofs using geometric figures.
Apply the definitions of complementary and supplementary.
State the definitions and use the theorems regarding vertical angles, perpendicular lines, supplementary angles, complementary angles and congruent angles.

Chapter 3:

Identify angle pairs formed by three intersecting lines.
Use angles formed by parallel lines and transversals to solve problems.
State and apply theorems regarding angle relationships to prove lines parallel.
Find and compare slopes of lines.
Find equations of lines.
Find the distance between a point and a line and between two parallel lines.

Chapter 4:

Classify triangles by sides and angles.
Identify the corresponding parts of congruent figures and name the figures appropriately.
Prove triangles congruent by SAS, AAS, ASA, SSS, HL.
Prove segments or angles of triangles congruent using CPCTC.
State and apply the theorems and corollaries regarding the sum of the angles of a triangle, and the exterior angles of a triangle.
State and apply theorems about isosceles and equilateral triangles .

Chapter 5:

State and apply the midsegment theorem.
Use coordinate geometry to investigate triangle relationships.
Establish coordinates of a figure on a coordinate plane.
Set up and execute a coordinate proof.
Apply the definitions of the median, altitude, angle bisector and the perpendicular bisector of a segment in a triangle.
State and apply the theorem about a point on the perpendicular bisector of a segment, and the converse.
State and apply the theorem about a point on the bisector of an angle, and the converse.
Find the circumcenter, incenter, centroid, or altitude of a triangle on the coordinate plane.
State and apply the theorems about incenters, circumcenters, and centroids.
State and apply the inequality theorems for one triangle.
State and apply the inequality theorems for two triangles.

Chapter 6:

Solve problems using ratio, proportion and scale factor.
State the requirements for two polygons to be similar.
State and apply similarity postulates and theorems for triangles.
Apply theorems regarding medians, altitudes and angle bisectors in similar triangles.
Apply theorems regarding triangle proportionality and parallel line proportionality.

Midterm Review

C1 p. 896-897 #1-12, 14, 18, 20, 24, 26, 32, 33, 35-37, 47, 49

C2 p. 898-899 #10, 15, 18-24, 31-34, 36-41

C3 p. 900-901 #1-6, 12-15, 17, 31, 34, 37, 41, 42, 45

C4 p. 902-903 #5, 7, 8, 10, 12, 17-19, 20-24, 29, 33

C5 p. 904-905 #1-5, 10, 13-34, 37, 41, 45, 48, 51

C6 p. 906-907 #2-22even, 23-36